

## TROVIS-VIEW

**samson**



**TROVIS**  
Elektronik von SAMSON



## Operating Instructions

**EB 6661 EN**

Edition January 2015

## Definition of signal words



### **DANGER!**

*Hazardous situations which, if not avoided, will result in death or serious injury*



### **NOTICE**

*Property damage message or malfunction*



### **WARNING!**

*Hazardous situations which, if not avoided, could result in death or serious injury*



### **Note:**

*Additional information*



### **Tip:**

*Recommended action*

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# 1 General

The TROVIS-VIEW 4 software allows users to configure and parameterize various SAMSON devices over a common user interface. It consists of the operator interface, communication server (SCS) and the device-specific module. Device-specific modules are available for the SAMSON products listed below:

## Electropneumatic positioners (4-20 mA)

- Type 3730-2 (V 1.10 and higher)
- Type 3730-3 with HART® communication (V 1.10 and higher)
- Type 3730-6 with HART® communication and pressure sensors (V 1.10 and higher)
- Type 3731-3 with HART® communication (V 1.30 and higher)

## Electropneumatic positioners (with bus communication)

- Type 3730-4 with PROFIBUS-PA communication (R 1.43/K 1.00 and higher)
- Type 3730-5 with FOUNDATION™ fieldbus communication (R 1.40/K 1.20 and higher)
- Type 3731-5 with FOUNDATION™ fieldbus communication (R 1.45/K 1.25 and higher)

## Electronic limit switch

- Type 3738-20 (V 1.00 and higher)
- Type 3738-50 (A 1.00/K 1.00 and higher)

## Transmitter

- Media 6/Type 5006 (V 2.00 and higher)

## TROVIS 5500 Automation System

- TROVIS 5573 (V 2.00 and higher; also earlier versions using memory module)
- TROVIS 5575 (V 2.00 and higher; also earlier versions using memory module)
- TROVIS 5576 (V 2.00 and higher; also earlier versions using memory module)
- TROVIS 5578 (V 2.20 and higher)
- TROVIS 5579 (V 2.00 and higher; also earlier versions using memory module)

## TROVIS 5600 Automation System

- TROVIS 5610 (V 1.06 and higher)

## Electric actuators

- Type 3374 (V 2.00 and higher)
- Type 5824/5825 (V 1.03 and higher)
- Type 5857 (V 1.02 and higher)

## Electric actuators with process controllers

- Type 5724-8 (V 1.10 and higher)

## Industrial controllers

- TROVIS 6493 (V 2.03 and higher)
- TROVIS 6495-2 (V 1.10 and higher)

## 1.1 System requirements

A computer with the following minimum requirements is needed:

### Hardware

- PC with Pentium processor or equivalent (1 GHz or faster), at least 512 MB RAM
- RS-232 serial interface or USB port (using a USB/RS-232 adapter) and suitable hardware depending on the SAMSON device used
- 1 GB hard drive space for x86 and 2 GB hard drive space for x64 (including space to install Microsoft® .NET Framework 4.0)
- For communication over Bluetooth<sup>1</sup> (e.g. Type 5724-8): Internal or external Bluetooth adapter (Bluetooth version 2.1 and higher)

### Software

- Operating system: Windows® XP (SP3), Windows® Vista (SP1), Windows® 7, Windows® 8 and 8.1 (only up to Windows® 7 in conjunction with USB drivers for isolated USB interface adapter and SAMSON USB devices) · Administrator rights required to install the software
- Microsoft® .NET Framework 4.0 (client profile)
- PDF reader

## 1.2 Installing the software



### **Note concerning the installation from a downloaded ZIP file:**

Download and unzip the ZIP file on your system before starting the installation. You can download the file free of charge from our website at [www.samson.de](http://www.samson.de) > Services > Software.



### **Note concerning the installation from a CD-ROM:**

Once inserted, the CD-ROM starts the installation program automatically, depending on the configuration of the operating system. You do not need to run the setup.exe.

- 🔧 If necessary, start the installation from the setup.exe.
- 🔧 Follow the on-screen prompts and instructions of the installation program.

<sup>1</sup> Not all device types can communicate over Bluetooth. More details are included in the mounting and operating instructions of the device. Bluetooth communication is not possible if these instructions do not contain any information on this topic.

## 1.3 Accessories for data transmission

The accessories listed below are available to transfer data between the SAMSON device and the computer. The accessories used depend on the device:

- Connecting cable RJ-12/D-Sub Order no. 1400-7699
- Memory pen-64 (1170-3163) Order no. 1400-9753
- Modular adapter Order no. 1400-7698
- Hardware package consisting of a memory pen-64, modular adapter and connecting cable Order no. 1400-9998
- Infrared adapter RS-232 Order no. 8864-0900
- Bracket for infrared adapter Order no. 1400-9769
- USB cable (mini-B, USB type A) Order no. 8801-7301
- Isolated USB interface adapter Order no. 1400-9740
- Serial interface adapter Order no. 1400-7700
- USB/RS-232 adapter Order no. 8812-2001
- USB converter 3 Order no. 1400-9377
- Memory module Order no. 1400-9379
- Mini module Order no. 1400-7436

		1400-7436	1400-9379	1400-9377	8812-2001	1400-7700	1400-9740	8801-7301	1400-9769	1400-0900	1400-9998	1400-9698	1400-9753	1400-7699
Electropneumatic positioners (4–20 mA)	Type 3730-2				•	•	•							
	Type 3730-3				•	•	•							
	Type 3730-6				•	•	•							
	Type 3731-3				•	•	•							
Electropneumatic positioners (with bus communication)	Type 3730-4				•	•	•							
	Type 3730-5				•	•	•							
	Type 3731-5				•	•	•							
Electronic limit switch	Type 3738-20				•	•	•							
	Type 3738-50				•	•	•							
Media 6 Differential Pressure Meter	Type 5006				•						•	•	•	•

<sup>1)</sup> No HART® communication between Types 3730-3, 3730-6 and 3731-3 Positioners and TROVIS-VIEW

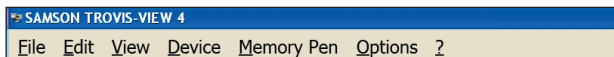


- Connecting cable RJ-12/D-Sub Order no. 1400-7699
- Memory pen-64 (1170-3163) Order no. 1400-9753
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- USB/RS-232 adapter Order no. 8812-2001
- USB converter 3 Order no. 1400-9377
- Memory module Order no. 1400-9379
- Mini module Order no. 1400-7436

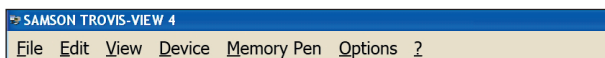
		1400-7436	1400-9379	1400-9377	8812-2001	1400-7700	1400-9740	8801-7301	1400-9769	1400-0900	1400-9998	1400-9698	1400-9753	1400-7699
TROVIS 5500 Automation System	TROVIS 5573	•	•	•										
	TROVIS 5575	•	•	•										
	TROVIS 5576	•	•	•										
	TROVIS 5579	•	•	•										
TROVIS 5600 Automation System	TROVIS 5610 with interface board 2b (RJ-12 jack at front)				•						•	•	•	•
	TROVIS 5610 with interface board 1 (USB B jack at front), USB B cable req.													
Electric actuators (with process controllers)	Type 3374				•						•	•	•	•
	Type 3375				•						•	•	•	•
	Type 5824/5825				•						•	•	•	•
	Type 5857				•						•	•	•	•
	Type 5724-8 (Bluetooth® communication)													
Industrial controllers	Type 5757-7				•						•	•	•	•
	TROVIS 6493								•	•				
	TROVIS 6495-2 without board								•	•				
	TROVIS 6495-2 with RS-232/USB board							•	•	•	•	•	•	•
	TROVIS 6495-2 with RS-485/USB board							•	•	•				

## 2 Menu bar

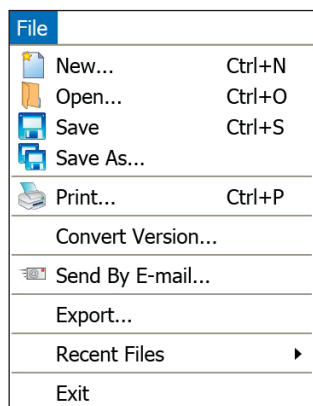
The menu bar for all device-specific modules includes the following menus: [File], [Edit], [View], [Device], [Options] and [?]. The [Memory pen] menu is only visible for modules that allow the use of a memory pen. See ► Section 1.3.



Menus and menu options can be selected using the mouse or computer keyboard. Press Alt together with the key assigned to the menu or menu option to select the menu or menu option over the keyboard. The underlined letters of the menus and menu options correspond with the keyboard keys that must be pressed in conjunction with the Alt key, e.g. Alt+F for [File].



### 2.1 [File] menu



Some of the menu options can also be selected by clicking the corresponding icon on the tool bar (see ► Section 2.3.1) or by using a key combination. The corresponding icons and key combinations are shown in the [File] menu.



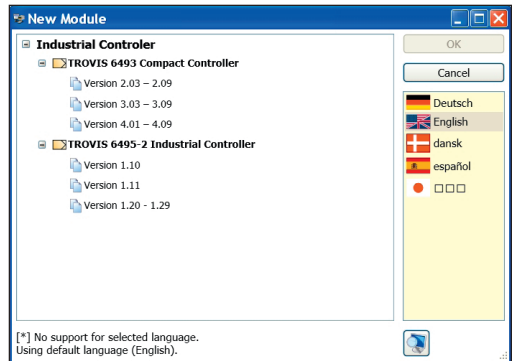
**Note:**

The [Convert Version ...] menu option for device modules that cannot be converted is written in gray to indicate that this option cannot be selected.

## 2.1.1 Creating a new TROVIS-VIEW file

New TROVIS-VIEW files contain the default values of a device module.

- ☞ Select [File > New...]. The *New Module* dialog box opens.
- ☞ Select a language.  
The language can be changed at any time. See ► Section 2.6.1.
- ☞ Select the module for the required firmware version.
- ☞ Click [OK] to confirm.



**Alternatively**, open the *New Module* dialog box by pressing Ctrl+N or by clicking this icon on the tool bar.

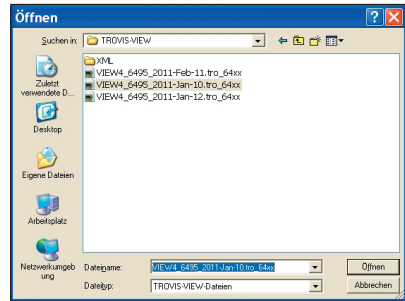


Click this icon to resize the dialog box.

## 2.1.2 Opening a TROVIS-VIEW file

**TROVIS-VIEW 4 files** have the filename extension ".tro\_" plus a device group identification code (for example, .tro\_64xx for the industrial controllers). **TROVIS-VIEW 3 files** have the filename extension ".tro" without a device group identification code. These files can also be opened in TROVIS-VIEW 4.

- ☞ Select [File > Open...]. The *Open* dialog box opens.
- ☞ Select the location from the drop-down list where the file is stored.
- ☞ Select the TROVIS-VIEW file you want.
- ☞ Click [Open] to open the TROVIS-VIEW file.

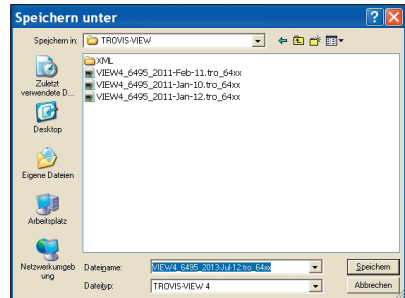


**Alternatively**, open the *Open* dialog box by pressing Ctrl+O or by clicking this icon on the tool bar.

## 2.1.3 Saving a TROVIS-VIEW file

TROVIS-VIEW 4 files are saved using the filename extension ".tro\_"

- ☞ Select [File > Save].
- If a TROVIS-VIEW file is to remain saved, save the new TROVIS-VIEW file under another name.
- ☞ Select [File > Save As...]. The *Save As* dialog box opens.
- ☞ Select the location from the drop-down list where the file is to be saved.
- ☞ Enter a file name.
- ☞ Click [Save] to save the TROVIS-VIEW file.



**Alternatively**, save the TROVIS-VIEW file by pressing Ctrl+S or by clicking this icon on the tool bar.



**Alternatively**, open the Save As dialog box by clicking this icon on the tool bar.



**Note:**

- TROVIS-VIEW automatically generates a systematically created file name when the box for Use automatic file name is checked in [Options > Filename]. See ► Section 2.6.3.
- The 'No complete record from device exists' warning indicates that data have not yet been uploaded from the device or that not all the data from TROVIS-VIEW have been downloaded onto the device. To obtain a complete record including all the changes previously made in TROVIS-VIEW, first download the TROVIS-VIEW data to the device and then upload the data again.

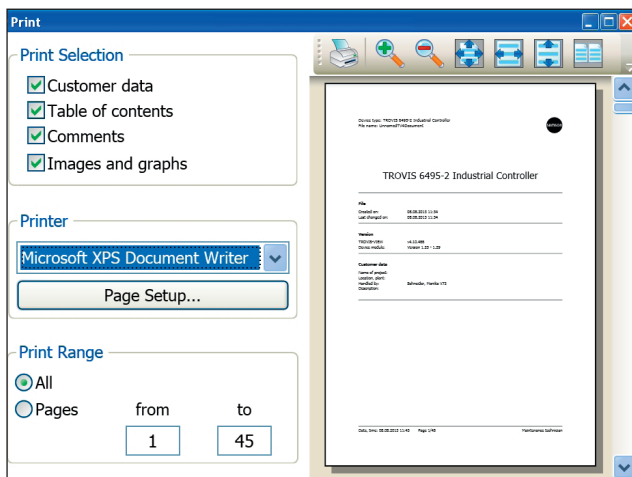
## 2.1.4 Printing a TROVIS-VIEW file

The print layout is optimized for a A4 page in portrait format.

Select [File > Print...].  
The *Print* dialog box opens.

Select which data are to be printed.  
All contents are selected by default:

- ☒ Customer data
- ☒ Table of contents
- ☒ Comments
- ☒ Images and graphs



- Select the printer you want to use.
- Select which pages you want to print.
- Click printer icon to start printing.



**Alternatively**, open the *Print* dialog box by pressing Ctrl+P or by clicking this icon on the tool bar.



**Note:**

- The display of the document in the dialog box can be adapted by the icons on the tool bar. This does not have any effect on the actual printout layout.
- The contents of individual folders can be printed separately. See ► Section 3.5.



Zoom in by 25 %



Zoom out by 25 %



Fit to page



Fit to width



Fit to height



Several pages

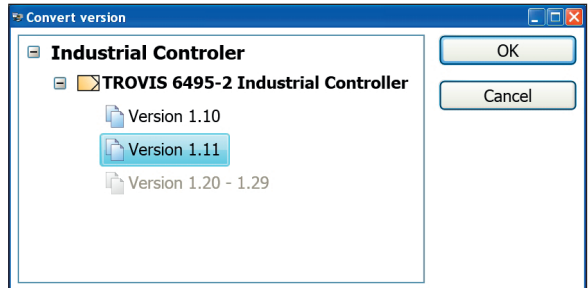
### 2.1.5 Converting a TROVIS-VIEW file

If the current version of the TROVIS-VIEW file is not the same as the version of the connected device, you must convert the file to match the device version.

**TROVIS 6495-2 Industrial Controller, Version 1.20 - 1.29**

The version of the TROVIS-VIEW file appears on the info bar. The version of the actual device is written on its nameplate.

- ☞ Select [File > Convert version...]. The *Convert version* dialog box opens.
- ☞ Select version.
- ☞ Click [OK] to confirm.



Click this icon to resize the dialog box.

## 2.1.6 Sending a TROVIS-VIEW file by e-mail

The TROVIS-VIEW files with the filename extension “.tro\_” can be attached to an e-mail sent by the e-mail program installed on the computer.

- ☞ Select [File > Send by E-mail...].

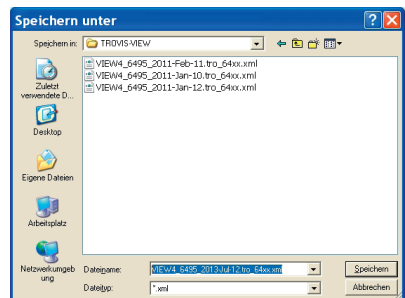


**Alternatively,** open the e-mail program by clicking this icon on the tool bar.

## 2.1.7 Exporting a TROVIS-VIEW file

The document is exported as an XML file.

- ☞ Select [File > Export...] to open the *Save As* dialog box.
- ☞ Select the location from the drop-down list where the file is to be saved.
- ☞ Enter a file name.
- ☞ Click [Save] to export the document.



## 2.1.8 Opening the most recently opened TROVIS-VIEW file

The [Recent files] option allows you to access the most recently opened TROVIS-VIEW files without having to search through folders on your hard drive.

☞ Select the TROVIS-VIEW file by selecting [File > Recent files].

## 2.1.9 Exiting TROVIS-VIEW




☞ Select [File > Exit].



**Alternatively,** exit TROVIS-VIEW by clicking this icon on the title bar.



## 2.2 [Edit]

Edit		
	Cut	Ctrl+X
	Copy	Ctrl+C
	Paste	Ctrl+V
Customer Data...		
Load Default Settings		

### 2.2.1 Cutting out folders and parameters

This function can only be performed in user-defined trees. See ► Section 3.

You can cut out folders and parameters and insert them into a user-defined tree. See ► Section 2.2.3.

- ☞ Select the folder or parameter in the user-defined tree.
- ☞ Select [Edit > Cut].



**Alternatively**, cut out folders or parameters by pressing Ctrl+X or by clicking this icon on the tool bar.

### 2.2.2 Copying folders and parameters

You can copy folders and parameters and insert them into a user-defined tree. See ► Section 2.2.3.

- ☞ Select the folder or parameter.
- ☞ Select [Edit > Copy].



**Alternatively**, copy folders or parameters by pressing Ctrl+C or by clicking this icon on the tool bar.

### 2.2.3 Pasting folders and parameters

This function can only be performed in user-defined trees. See ► Section 3.

Only folders or parameters that have been cut or copied beforehand can be pasted. See ► Section 2.2.1 and Section 2.2.2.

- ☞ Select the location in the user-defined tree where the folder or parameter is to be pasted.
- ☞ Select [Edit > Paste].



**Alternatively**, paste folders or parameters by pressing Ctrl+V or by clicking this icon on the tool bar.

## 2.2.4 Editing customer data

TROVIS-VIEW allows you to save information on the document. The date of creation and revision are automatically added and cannot be changed.

- ☞ Select [Edit > Customer data...] to open the *Customer data* dialog box.
- ☞ Enter the required details. The number of characters is not restricted.
- ☞ Click [OK] to save the details.



### **Note:**

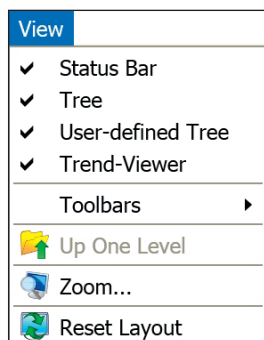
*Customer data are printed in the TROVIS-VIEW document when the Customer data option is checked in the Print dialog box. See ► Section 2.1.4.*

## 2.2.5 Loading default settings

This command causes all parameters of a document to be overwritten with the default settings of the device module. The command can only be performed in offline mode. See ► Section 2.4.4.

- ☞ Select [Edit > Load Default Settings].
- ☞ Click [OK] to confirm the message "Overwrite data?".

## 2.3 [View]



### 2.3.1 Hiding/showing bars and windows

Bars and windows in TROVIS-VIEW can be hidden or shown as required.

All the bars and windows are shown in the default program layout (select [View > Reset Layout], see ► Section 2.3.4). All options are checked (✓☐) in the [View] menu.

☐ Check or uncheck the status bar and windows in the [View] menu and select [View > Toolbars] to show or hide tool bars or windows.

#### Status bar

**TROVIS 6495-2 Industrial Controller, Version 1.20 - 1.29**

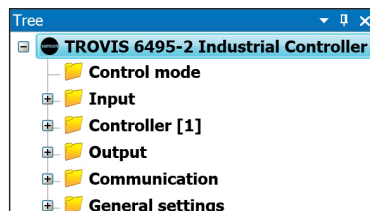
The status bar shows the device module and the version of the current TROVIS-VIEW file.

If the current version of the TROVIS-VIEW file is not the same as the version of the connected device, the TROVIS-VIEW file must be converted to match the device version [File > Convert Version...]. See ► Section 2.1.5.

Depending on the module, the operating state or condensed state of the device are also indicated on the status bar. Refer to the mounting and operating instructions of the device for more details.

#### Tree

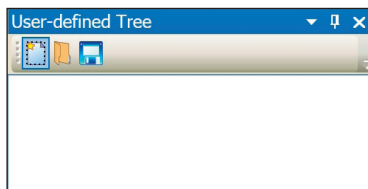
The tree is located on the left-hand side below the status bar in the default program layout. It contains all the folders and subfolders of a module.



### User-defined tree

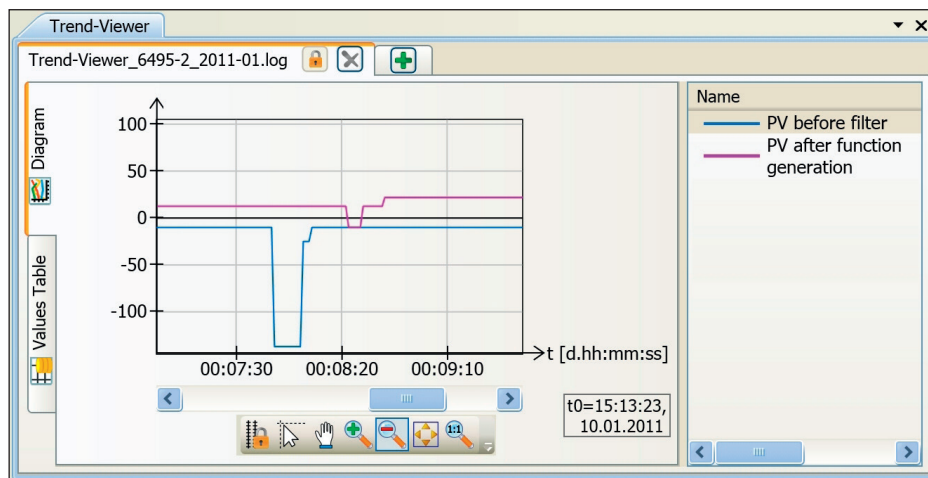
The user-defined tree is located on the left-hand side below the tree window in the default program layout.

The user-defined tree shown in a new TROVIS-VIEW file depends on the module. If a user-defined tree has been created beforehand for the same module, the same tree appears automatically in a new TROVIS-VIEW file.



### Trend-Viewer

The Trend-Viewer is located in the bottom of the window in the default program layout. It contains a chart of the operating data in online mode (see ► Section 2.4.4).



## Tool bars

### Standard



Meaning of icons (starting on the left):

- Create a new TROVIS-VIEW file. See ► Section 2.1.1
- Open a TROVIS-VIEW file. See ► Section 2.1.2
- Save a TROVIS-VIEW file. See ► Section 2.1.3
- Save a TROVIS-VIEW file with new name. See ► Section 2.1.3
- Cut out folders and parameters. See ► Section 2.2.1
- Copy folders and parameters. See ► Section 2.2.2
- Paste folders and parameters. See ► Section 2.2.3
- Print a TROVIS-VIEW file. See ► Section 2.1.4
- E-mail a TROVIS-VIEW file. See ► Section 2.1.6
- Move up one level in the directory. See ► Section 2.3.2
- Change the zoom setting. See ► Section 2.3.3
- Open the *About* dialog box. See ► Section 2.7.3

### Communication Offline



Meaning of icons (starting on the left):

- Read data from device. See ► Section 2.4.2
- Write data to device. See ► Section 2.4.3
- Start online mode. See ► Section 2.4.4

The icon shown on the right appears on the tool bar during online mode of the Trend-Viewer (this mode runs separately from the main application).

### Communication Online

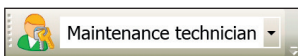


Meaning of icons (starting on the left):

- Read data from device. See ► Section 2.4.2
- Write data to device. See ► Section 2.4.3
- Start online mode. See ► Section 2.4.4

The icon shown on the right appears on the tool bar during online mode of the Trend-Viewer (this mode runs separately from the main application).

### User level



(tool bar depending on module)

- Change the user level. See ► Section 2.4.1

### Find



Search for a parameter or folder within the document.

- ✎ Enter search term.
- ✎ Start search by clicking the magnifying glass icon or with [F3].



#### **Note:**

*Search terms that do not exist in the current document are highlighted in red.*

### Wizard



(tool bar depending on module)

The wizard guides you through the process of setting up the device step-by-step.

## 2.3.2 Moving up one level in the directory

Moving up one level in the directory is only possible when a subfolder containing parameters or other subfolders is shown in the main window.

- ✎ Select [View > Up One Level].

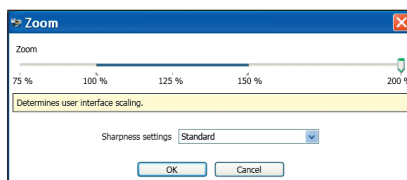


**Alternatively**, move up one level in the directory by clicking this icon on the tool bar.

## 2.3.3 Changing the zoom setting

You can zoom in or out of the program window within the range between 75 and 200 %.

- ☞ Select [View > Zoom...] to open the *Zoom* dialog box.
- ☞ Set zoom or change text sharpness setting.
- ☞ Click [OK] to confirm.



**Alternatively**, open the *Zoom* dialog box by clicking this icon on the tool bar.



### **Note:**

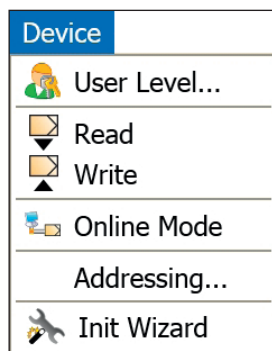
*Decrease the zoom setting when not all the windows or tool bars appear on the screen.*

## 2.3.4 Resetting the layout

This command resets the layout of TROVIS-VIEW to default.

- ☞ Select [View > Reset Layout].

## 2.4 [Device]



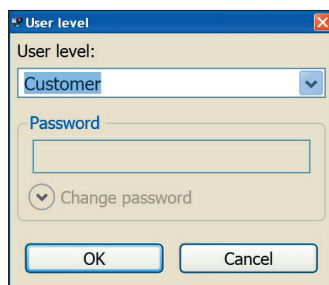
### 2.4.1 Changing the user level

Right of access to certain folders and parameters is assigned in some modules depending on the user level.

The default user level is displayed after opening a new TROVIS-VIEW file. Modules have different default user levels, for example, *Customer*, *Maintenance technician* or *Specialist*. Depending on the module, it may be possible to change to another user level with extended read/write access. Refer to the mounting and operating instructions of the device for more details.

**The user level can only be changed when TROVIS-VIEW and the device are not connected (in offline mode). See ► Section 2.4.4.**

- ☞ Select [Device > User Level] to open the *User level* dialog box.
- ☞ Select or enter the user level.
- ☞ To change from the default user level: enter password.
- ☞ Click [OK] to confirm user level.



**Alternatively,** open the *User level* dialog box by clicking this icon on the tool bar.



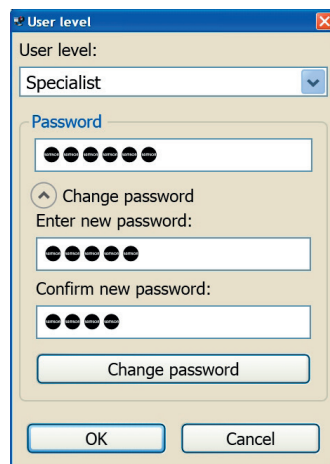
**Note:**

*The user level can be selected directly from the drop-down list on the tool bar.*

## Changing the password

The default password is "samson". The password can be changed.

- ✎ Enter the currently valid password.
- ✎ Click option [Change password].
- ✎ Enter the new password twice:  
[Enter new password]  
[Confirm new password]
- ✎ Click [Change password] button to save new password.

**Note:**

*The changed password remains saved even after loading the default settings.*

## 2.4.2 Reading data from the device

Reading data from the device causes the complete data record to be uploaded from the device.

- ✎ Select [Device > Read].



**Alternatively**, read data from the device by clicking this icon on the communication tool bar.



Parameters that have been read from the device are marked in TROVIS-VIEW by this symbol.

**Similar topics:**

- Read parameters in a folder and its subfolder from the device. See ► Section 3.2.
- Read a single parameter from the device. See ► Section 4.2.

## 2.4.3 Writing data to the device

Writing data to the device causes the complete data record to be downloaded to the device.

☞ Select [Device > Write].



**Alternatively**, write data to the device by clicking this icon on the communication tool bar.

**Similar topics:**

- Write parameters in a folder and its subfolders to the device. See ► Section 3.3.
- Write a single parameter to the device. See ► Section 4.3.

## 2.4.4 Starting the online mode of the main application

In online mode, communication is established permanently between the device and TROVIS-VIEW. All the configuration and operating data are transferred cyclically from the device and displayed in TROVIS-VIEW. Any changes performed in TROVIS-VIEW are directly downloaded onto the device.

**Note:**

*A separate online mode for the Trend-Viewer can be set in [Options > Trend-Viewer]. This allows the online mode of the Trend-Viewer to be started separately from the main application. See ► Section 2.6.5.*

### Starting the online mode of the main application

☞ Select [Device > Online Mode].



**Alternatively**, start the online mode by clicking this icon on the communication tool bar.

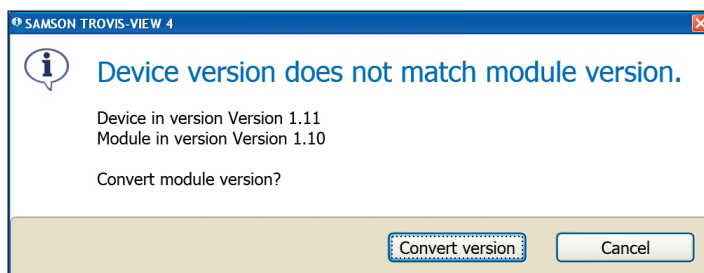


In online mode, this animated icon appears on the communication tool bar.



**Note:**

- If TROVIS-VIEW is unable to find the device, check the server and communication settings. See ► Section 2.6.2.
- The online mode can only run when the version of the TROVIS-VIEW file matches that of the device. A conversion must be performed to start the online mode if this action is possible.



## Exiting the online mode of the main application

☞ Select [Device > ✓ Online Mode].



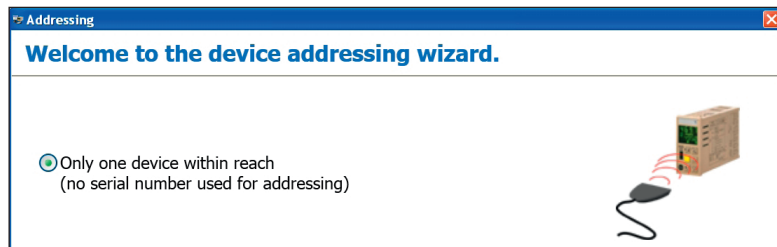
**Alternatively**, exit the online mode by clicking this icon on the communication tool bar.



In offline mode, this icon is not animated on the communication tool bar.

## 2.4.5 Setting the device address

We recommend to use the serial number of devices that can be connected to TROVIS-VIEW over an infrared interface to address them. This is particularly recommendable when several devices of the same type are located within range of the infrared adapter.



- ☞ Select [Device > Addressing ...].  
The wizard for device addressing opens.
- ☞ Follow the instructions.

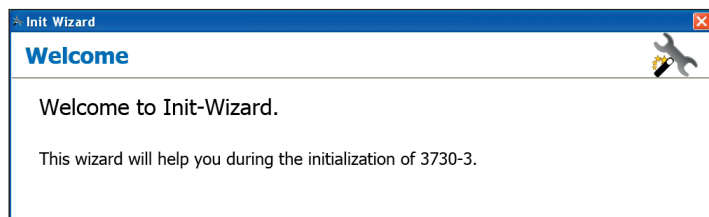
## 2.4.6 Perform settings using the wizard

In some modules, a device connected to TROVIS-VIEW can be configured step-by-step using the start-up wizard.

---

**!** **NOTICE**  
It is not possible to restore the configuration saved in TROVIS-VIEW or in the device itself that was valid before performing the start-up using the start-up wizard.

---



- ☞ Select [Device > Start-up wizard]. The *Start-up wizard* dialog box opens.
- ☞ Follow the instructions.



**Alternatively**, start the wizard by clicking this icon on the wizard tool bar.

## 2.5 [Memory pen]

The [Memory pen] menu is only available when a memory pen can be inserted into the device.

Memory Pen
Read
Write
Status...
Set Command Mode
Read Recorded Data...
Communication Port...



### NOTICE

*The memory pen serves as a data carrier and is able to load and store data in its non-volatile memory. The functions of the memory pen described in following are only guaranteed if the memory pen-64 (order no. 1400-9753) is used. See ► Section 1.3.*

### Copying function

The memory pen can be loaded with data configured in TROVIS-VIEW and the configuration data transferred to one or several devices of the same type and version.

Additionally, the data from the device can be written to the memory pen. This allows the configuration data to be simply copied from one device and loaded onto other devices of the same type and version.

### Data logging

Device data are logged until the memory pen is full. The data logged in the memory pen can be read out in TROVIS-VIEW and saved to a LOG file. See ► Section 2.5.6.

### Command mode

A command is downloaded onto the memory pen and transferred onto the device. See ► Section 2.5.4.



**Note:**

*The functions of the memory pen vary depending on the device used. See ► Section 1.3.*

---

**To use the memory pen:**

- ✎ Connect the modular adapter (order no. 1400-7698, ► Section 1.3) directly to the COM port of a computer or connect it using a USB/RS-232 adapter (order no. 8812-2001) to the USB port of the computer.
- ✎ Set the communication port. See ► Section 2.5.5.

## 2.5.1 Reading data from the memory pen

TROVIS-VIEW 4 uploads the complete data record from the memory pen.

---



**Note:**

*Data can only be uploaded from memory pens which contain data from the open TROVIS-VIEW file. Data cannot be uploaded from memory pens that have been configured as command pens.*

---

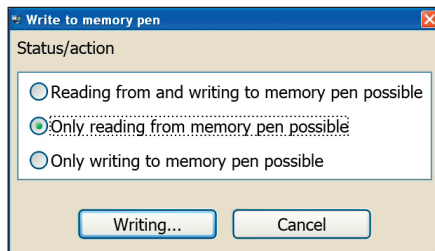
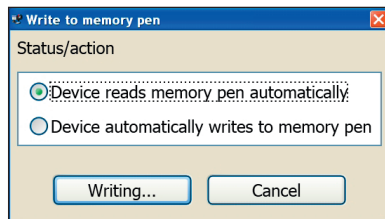
- ✎ Select [Memory Pen > Read].



Parameters that have been read from the device are marked in TROVIS-VIEW by this symbol.

## 2.5.2 Writing data to the memory pen

This command allows data from TROVIS-VIEW to be downloaded onto the memory pen. In the *Status/action* dialog box, the direction in which data are to be transferred between the memory pen device is determined.



The status and actions vary depending on the module used. Possible states and actions include:

**Devices without local operation**, e.g. Type 3374 and Type 5824 Electric Actuators

- **Device reads memory pen automatically:** Data are transferred from the memory pen to the device.
- **Device automatically writes to memory pen.** Data are transferred from the device to the memory pen.

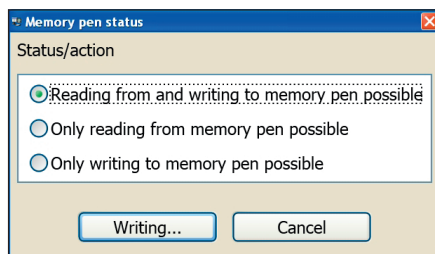
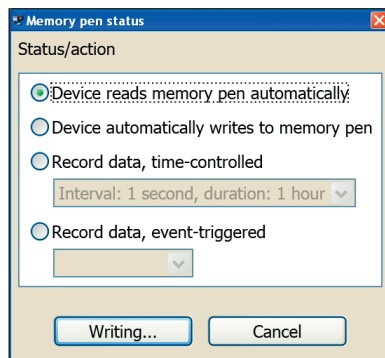
**Devices with local operation**, e.g. TROVIS 6495-2 Industrial Controller and Media 6

- **Reading from and writing to memory pen possible:** Data can be transferred from the device to the memory pen and from the memory pen to the device over local operation.
- **Only reading from memory pen possible:** Data can only be transferred from the memory pen to the device over local operation. Data transfer from the device to the memory pen is blocked.
- **Only writing to memory pen possible:** Data can only be transferred to the memory pen from the device over local operation. Data transfer from the memory pen to the device is blocked.

- ☞ Select [Memory Pen > Write]. The *Status/action* dialog box automatically appears.
- ☞ Select the status/action of the memory pen (●).
- ☞ Click [Writing...].

## 2.5.3 Changing the status

The status determines how the memory pen is to be used when it is inserted into the device.



The selectable status varies depending on the module. Possible states include:

**Device modules with command function**, e.g. Type 3374 and Type 5824 Electric Actuators

- **Device reads memory pen automatically:** Data are transferred from the memory pen to the device.
- **Device automatically writes to memory pen.** Data are transferred from the device to the memory pen.
- **Record data, time-controlled:** Operating data are logged in the memory pen according to a time schedule.
- **Record data, event-triggered:** Operating data are logged in the memory pen triggered by an event.

**Device modules without command function**, e.g. TROVIS 6495-2 Industrial Controller and Media 6

- **Reading from and writing to memory pen possible:** Data can be transferred from the device to the memory pen and from the memory pen to the device over local operation.
- **Only reading from memory pen possible:** Data can only be transferred from the memory pen to the device over local operation. Data transfer from the device to the memory pen is blocked.
- **Only writing to memory pen possible:** Data can only be transferred to the memory pen from the device over local operation. Data transfer from the memory pen to the device is blocked.



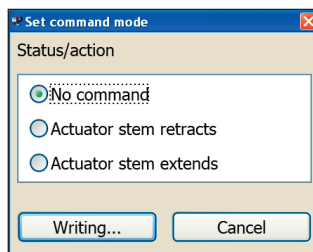
- ✎ Select [Memory Pen > Status...]. The *Memory pen action* dialog box automatically appears.
- ✎ Select status (●).
- ✎ Click Writing... button.

## 2.5.4 Setting the command mode

The command mode is only available in certain modules.

The command loaded onto the memory pen is performed as soon as the memory pen is inserted into the device. The commands that can be selected vary depending on the module.

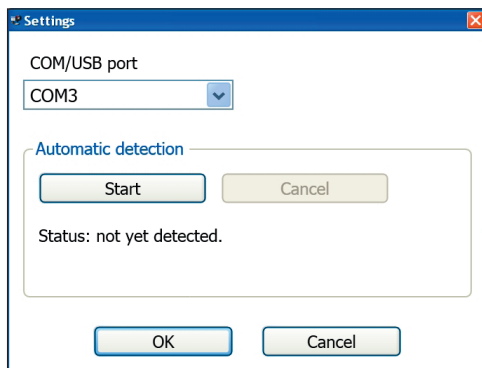
- ✎ Select [Memory Pen > Set Command Mode]. The *Set command mode* dialog box opens.
- ✎ Select the command (●) as required.
- ✎ Click [Writing...] to confirm.



## 2.5.5 Setting the communication port

Perform the action described once whenever TROVIS-VIEW cannot find the connected memory pen.

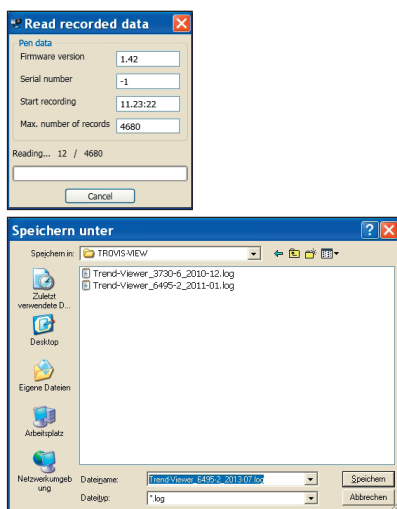
- ✎ Select [Memory Pen > Communication Port...]. The *Settings* dialog box appears.
- ✎ Click [Start] to start automatic detection. The status changes to 'Device found at COM...' if TROVIS-VIEW finds the memory pen connected to the computer.
- ✎ Click [OK] to confirm the communication settings.



## 2.5.6 Reading recorded data

Data logged on the memory pen by the action 'Record data, time-controlled' or 'Record data, event-triggered' can be saved in a LOG file in TROVIS-VIEW.

- ✎ Select [Memory Pen > Read recorded data].  
After checking the memory pen and the data saved on it, TROVIS-VIEW uploads the logged data. After reading all the data, the Save As dialog box opens.
- ✎ Select the location from the drop-down list where the file is to saved.
- ✎ Enter the file name.
- ✎ Click [Save] to save data.



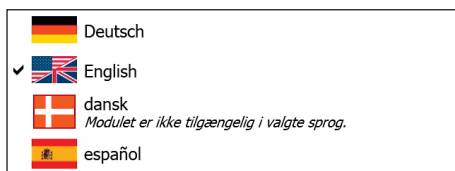
## 2.6 [Options]



### 2.6.1 Changing the language

The language setting can be changed in the offline mode.

- ✎ Select [Options > Language] and choose the language from the list.
- ✎ ✓ indicates which language is active.



## 2.6.2 Establishing communication with the device

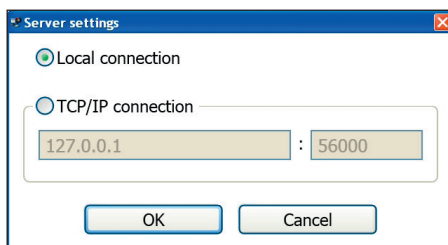
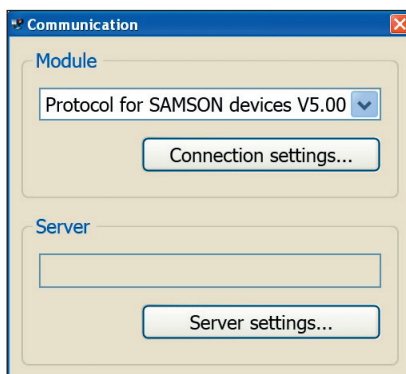
Perform the action described once after opening a document to allow TROVIS-VIEW to find the connected device.



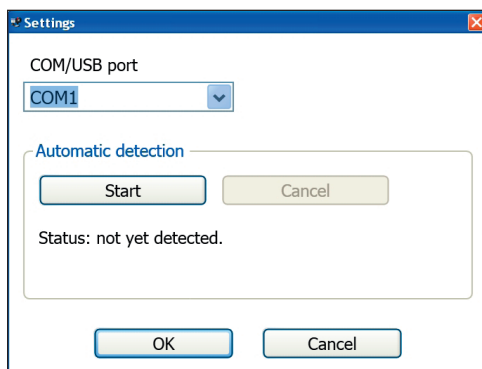
### **Note on Bluetooth communication:**

- For communication over Bluetooth, the connection to the device must be established using the software included with the Bluetooth adapter. If an adapter with legacy pairing (Bluetooth version 2.0) is used, you first need to enter the coupling code "1234". This is not needed for a Bluetooth adapter with secure simple pairing (Bluetooth version 2.1 and higher).
- SAMSON devices usually announce themselves to a computer with a name made up from the type and serial number (e.g. SAMSON5724-8\_....). Devices with older firmware versions may, however, use the name of the Bluetooth chip manufacturer on announcing themselves.

- ☞ Select [Options > Communication...]. The *Communication* dialog box opens.
- ☞ Click [Server settings...] to open the *Server settings* dialog box.
- ☞ Select the connection (☉):
  - Local connection when the communication server (SCS) and TROVIS-VIEW run on the same computer.
  - TCP/IP connection when the communication server (SCS) and TROVIS-VIEW run on different computers.
- ☞ Click [OK] to confirm the server settings. The *Server settings* dialog box closes.



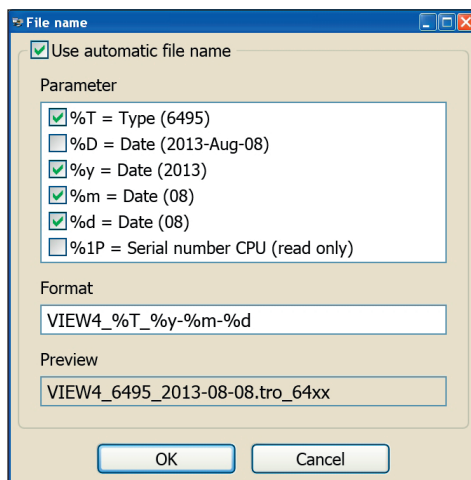
- ✎ Click [Connection settings...] to open the *Connection settings* dialog box.
- ✎ Click [Start] to start automatic detection. The status changes to 'Device found at COM...' if TROVIS-VIEW finds the device connected to the computer.
- ✎ Click [OK] to confirm the communication settings. The *Settings* dialog box closes.
- ✎ Click [OK] to confirm the communication settings.



## 2.6.3 Generating automatic file names

If required, the file name can be automatically generated on saving the latest version of a TROVIS-VIEW document. Users can determine which details are to be used to generate the file name.

- ✎ Select [Options > File Name...]. The dialog box as shown here opens.
- ✎ Check the 'Use automatic file name' box (☑).
- ✎ Select details to be used in the automatically generated file name:
  - ☒ %T = Type
  - ☒ %D = Date
  - ☒ %y = Date (year)
  - ☒ %m = Date (month)
  - ☒ %d = Date (day)
  - ☒ %1P = Serial no.
  - ☒ %2P = Tag no.
- ✎ Click [OK] to confirm.



**Note:**

The automatically generated file name can still be changed on saving the TROVIS-VIEW file regardless of the settings made here.

## 2.6.4 Showing message boxes

By checking the 'Do not show this message again' box (☒) , the last response to the message is saved. In the event of a message, it is no longer shown. In order to show the message again, the saved (automatic) response must be deleted.

- ☞ Select [Options > Show Message Boxes].
- ☞ Select message.
- ☞ Click [Show message again].
- ☞ Click [OK].

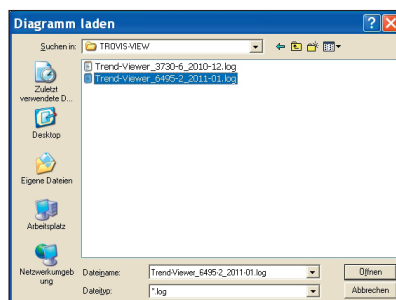
## 2.6.5 Configuring the Trend-Viewer

Load diagram...
Load Trend-Viewer default settings
Online with main application
<input checked="" type="checkbox"/> Trend-Viewer online mode, sampling time... ▶
<input checked="" type="checkbox"/> Record all points
Optimize values

### Loading a diagram

Trend-Viewer files are saved using the filename extension ".log".

- ☞ Select [Options > Trend-Viewer > Load diagram ...]. The *Load diagram* dialog box opens.
- ☞ Select the directory from the drop-down list where the file is stored.
- ☞ Select the file you want to open.
- ☞ Click [Open] to load diagram.



### Loading Trend-Viewer default settings

Loading the default settings of the Trend-Viewer causes all data from the Trend-Viewer to be deleted. The Trend-Viewer is shown in the default layout with its default data points.

☞ Select [Options > Trend-Viewer > Load Trend-Viewer default settings].

### Selecting online mode

The Trend-Viewer can be run in online mode together with the main application or separately.

#### – Running the online mode together with main application

The refresh rate depends on the total number of data points currently being displayed, i.e. including those shown in the main application. The refresh rate may be slower depending on the number of the data points shown in the main window.

Data recording finishes as soon as the online mode of the main application is ended.

☞ Select [Options > Trend-Viewer > Online with main application].

#### – Running the online mode separately from the main application

The values of the Trend-Viewer are logged according to the selected sampling time (rate). The sampling time can be adjusted within a range from Minimal (fastest possible rate) to 300 s.

☞ Select the sampling time from [Options > Trend-Viewer > Trend-Viewer online mode, sampling time...].

✓ indicates active online mode.



This icon appears on the communication tool bar during online mode of the Trend-Viewer (this mode runs separately from the main application).

### Selecting how the logged values are to be shown in the graph

The values logged in the Trend-Viewer can be shown in the graph exactly as they are recorded or in optimized form. In the optimized form, in addition to the first and last visible values, only the values that have changed since the last recording are shown.

☞ Select menu option:

[Options > Trend-Viewer > Record all points] or  
[Options > Trend-Viewer > Optimize values]

✓ indicates which graph form is active.

## 2.7 [?] (Help)

### 2.7.1 Opening documentation on the device

PDF documents for the device module are saved in TROVIS-VIEW.

☞ Select [? > Documentation] to open documentation on the device.



**Note:**

*The most recent documentation is available on the SAMSON website (<http://www.samson.de>).*

### 2.7.2 Opening TROVIS-VIEW documentation

PDF files of these Operating Instructions (EB 6661 EN) and the associated Data Sheet T 6661 EN can be viewed in TROVIS-VIEW.

☞ Select [?] (Help).

### 2.7.3 Opening the *About* dialog box

If you have any questions about this software, the following details must be submitted:

- TROVIS-VIEW version
- Module version
- Microsoft .NET Runtime version

Details on TROVIS-VIEW 4 are listed in the dialog box.

☞ Select [? > About].





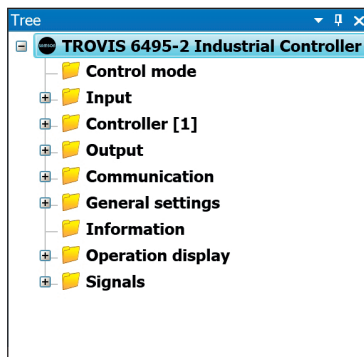
**Alternatively**, open the *About* dialog box by clicking this icon on the tool bar.

### 3 Tree and user-defined tree

#### Tree

The tree structure of TROVIS-VIEW is fixed and cannot be changed. All the module-specific parameters are arranged in folders and their subfolders.

The contents of the selected folder appear in the main window. See ► Section 4. After opening a file, only the main folders are shown in the tree. Click  to expand the folder and show its subfolders. Click  to collapse the folder tree.



A faulty folder or parameter appears in a folder marked by this icon.



#### Note:

*The tree structure cannot be changed. Create a user-defined tree with selected contents and a different structure in the [User-defined Tree] window.*

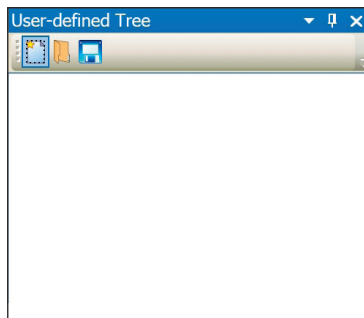
The [Tree] window is located on the left-hand side below the status bar in the default program layout.

#### User-defined tree

The user-defined tree can be created as required to show parameters and folders from the TROVIS-VIEW tree.

The user-defined tree shown in a new TROVIS-VIEW file depends on the module. If a user-defined tree has been created beforehand for the same module, the same tree appears automatically in a new TROVIS-VIEW file.

The [User-defined Tree] window is located underneath the [Tree] window in the default program layout.





### 3.1 Creating a user-defined tree

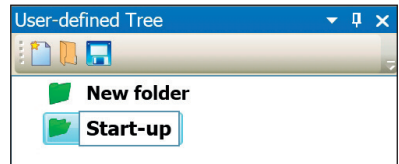
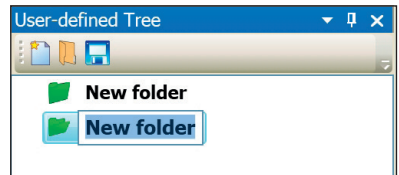
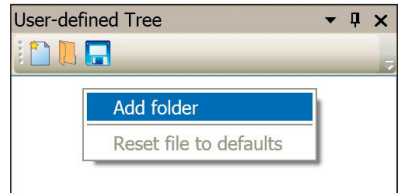
The user-defined tree is created from the parameters of the specified module-specific tree. New folders can be added or existing folders including their contents can be copied from the tree and inserted into the user-defined tree.

#### Adding a folder

- ☞ Place the mouse cursor in the [User-defined Tree] window.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Add folder].

A [New folder] is created.

- ☞ Name the folder.
- ☞ Click on this icon to confirm the added folder.



**Note:**

To add subfolders, select the folder from one level higher up before opening the context-sensitive menu.

#### Deleting a folder

All the associated subfolders and parameters are deleted on deleting a folder.

- ☞ Select the folder.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Delete folder].

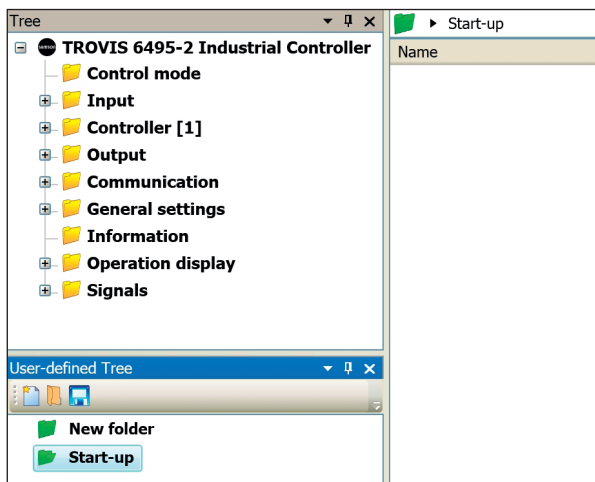
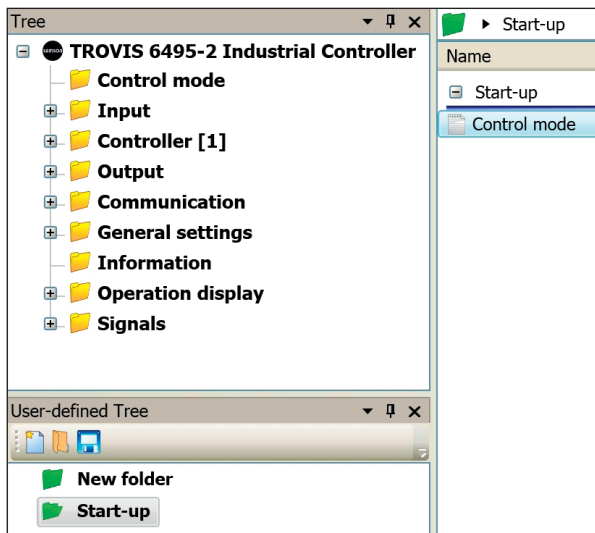
### Copying and pasting folders and parameters

All the associated subfolders and parameters are copied and pasted on copying and pasting a folder.

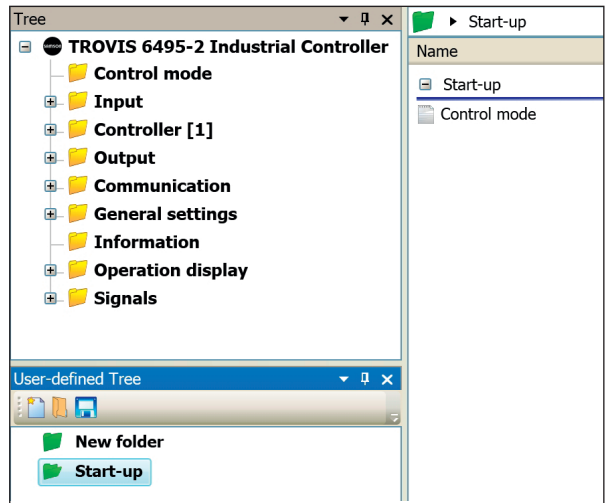
- ✎ Select the folder or parameter in the TROVIS-VIEW tree.
- ✎ Copy the folder or parameter by clicking on this icon.



- ✎ Select the location in the user-defined tree where the folder or parameter is to be pasted.



- ☞ Paste the folder or parameter by clicking on the icon shown here.



**Note:**

*You can also drag and drop folders and parameters from the TROVIS-VIEW tree into the user-defined tree.*

### Renaming a folder

- ☞ Select the folder in the user-defined tree.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Rename folder].

### Deleting folders and parameters

- ☞ Select the folder or parameter in the main application.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Delete selection].

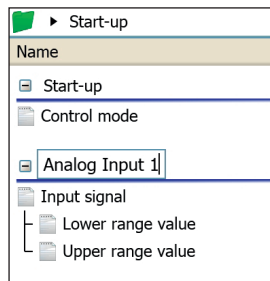
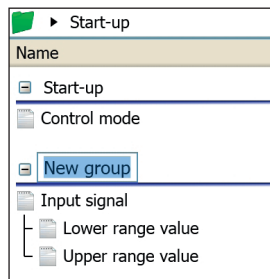
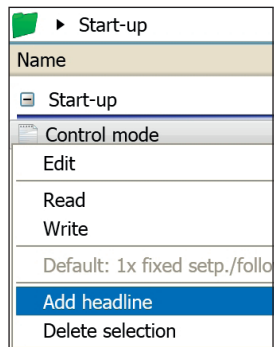
### Adding a headline

Headlines arrange the parameters of a folder into individual groups.

- ✎ Right-click on the main window to open a context-sensitive menu.
- ✎ Select [Add headline].

The headline is added above the selected area.

- ✎ Enter headline into [New group] field.
- ✎ Drag and drop parameters into the newly created group as required.



### Changing a headline

- ✎ Select the headline in the main application.
- ✎ Right-click to open a context-sensitive menu.
- ✎ Select [Change headline].

### Deleting a headline

- ☞ Select the headline.
- ☞ Press delete key to delete headline.

## 3.2 Uploading data from a folder



When TROVIS-VIEW is running in the offline mode (indicated by this icon on the communication tool bar), communication can be established by selecting [Read] to specifically upload data from the connected device. The command causes **all the parameters** of a folder and the associated subfolder to be uploaded from the device.

- ☞ Select the folder.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Read].



Parameters that have been read from the device are marked in TROVIS-VIEW by this symbol.

### Similar topics:

- Read all parameters from the device. See ► Section 2.4.2.
- Read a single parameter from the device. See ► Section 4.2.

## 3.3 Downloading data from a folder



When TROVIS-VIEW is running in the offline mode (indicated by this icon on the communication tool bar), communication can be established by selecting [Write] to specifically download data to the connected device. The command causes **all the parameters** of a folder and the associated subfolder to be downloaded to the device.

- ✎ Select the folder.
- ✎ Right-click to open a context-sensitive menu.
- ✎ Select [Write].

### Similar topics:

- Write all parameters from TROVIS-VIEW to the device. See ► Section 2.4.3.
- Write a single parameter to the device. See ► Section 4.3.

## 3.4 Resetting all data to defaults

The [Reset all data to defaults] command causes all write-enabled parameters of a folder and the associated subfolders to be reset to their default settings. The default values are defined for every write-enabled parameter of a device module.

- ✎ Select the folder.
- ✎ Right-click to open a context-sensitive menu.
- ✎ Select [Reset all data to defaults].

### Similar topics:

- Reset all parameters to their default settings. See ► Section 2.4.
- Reset a single parameter to its default setting. See ► Section 4.1.

## 3.5 Printing data from a folder

The [Print...] command causes all the parameters of a folder and the associated subfolders to be printed.

- ✎ Select the folder.
- ✎ Right-click to open a context-sensitive menu.
- ✎ Select [Print...]. The *Print* dialog box opens.
- ✎ Perform print settings and start printing. See ► Section 2.1.4.

## 4 Main window

The parameters and subfolders of a folder selected in the Tree or User-defined Tree are shown in the main window.

The parameters are assigned to different classes which are identified by icons:



Parameter can be written to the device: The parameter can be edited and written to the device.



Device parameter cannot be edited: The parameter is read from the device.



Parameter can be executed in the device




Device parameter that can be edited but not written to the device



### **Note:**

*Device parameters that cannot be edited are marked “--” until the parameter is uploaded from the connected device.*

Various icons in the  column indicate the source from which TROVIS-VIEW has received the parameter values. If a parameter is assigned an impermissible value, an error message appears instead of the source.



User-edited: The value has been changed in TROVIS-VIEW.



From device: The value has been uploaded from the device. A refreshed value during online mode is indicated by a green x in the icon.



From file, originally from device: The value was originally uploaded from the device, saved in a file and has now been reread into TROVIS-VIEW from the file.



From file, originally from device: The value was originally changed in TROVIS-VIEW, saved in a file and has now been reread into TROVIS-VIEW from the file.



From file: The value originates from a file that has been saved.



From memory pen: The value has been adopted from the memory pen.



Impermissible or invalid value: Error



Value outside range (top)



Value outside range (bottom)



**Note:**

*An icon is not assigned to a parameter before it has been edited in TROVIS-VIEW (default setting) or data have not yet been uploaded from the device.*

---



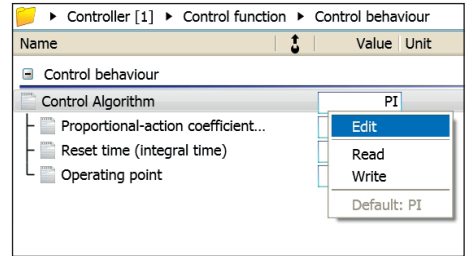
## 4.1 Editing parameters



Parameters that can be edited are marked by these icons. These parameters can be edited in TROVIS-VIEW.

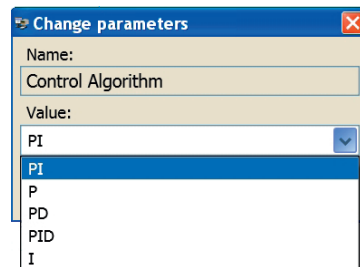
- ☞ Select the parameter.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Edit].
- ☞ The *Change parameters* dialog box opens.

**Alternatively**, open the dialog box by double-clicking the parameter.



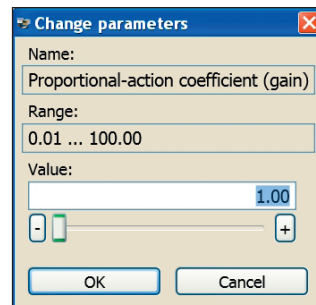
### Parameters with selectable values:

- ☞ Select value from drop-down list.
- ☞ Click [OK] to confirm value.



### Parameter with specified range:

- ☞ Enter the value within the defined range or adjust it over the – and + scale.
- ☞ Click [OK] to confirm value.



### Fast setting of default, minimum and maximum value:

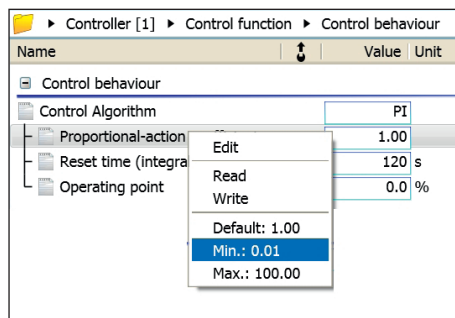
- ☞ Select the parameter.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select option:

**Default:** Reset the parameter to the indicated default setting.

**Min:** Resets the parameter to the indicated minimum value (only for parameters with a specified range).

**Max:** Resets the parameter to the indicated maximum value (only for parameters with a specified range).

Options written in gray indicate that the value is the same as the optional setting.



## 4.2 Uploading a single parameter



When TROVIS-VIEW is running in the offline mode (indicated by this icon on the communication tool bar), communication can be established by selecting [Read] to specifically upload data from the connected device. The command causes **a single parameter** to be uploaded from the device.

- ☞ Select the parameter.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Read].



Uploaded parameters are marked by this icon (from device).

### Similar topics:

- Read all parameters from the device. See ► Section 2.4.2.
- Read parameters in a folder and its subfolder from the device. See ► Section 3.2.

## 4.3 Downloading a single parameter



When TROVIS-VIEW is running in the offline mode (indicated by this icon on the communication tool bar), communication can be established by selecting [Write] to specifically download data to the connected device. The command causes a single parameter from TROVIS-VIEW to be downloaded on to the connected device.

- ☞ Select the parameter.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Write].

### Similar topics:

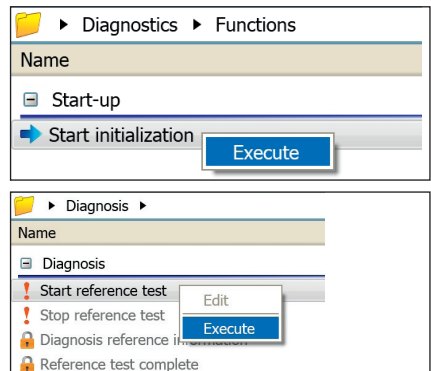
- Write all parameters from TROVIS-VIEW to the device. See ► Section 2.4.3.
- Write parameters in a folder and its subfolder to the device. See ► Section 3.3.

## 4.4 Executing parameters

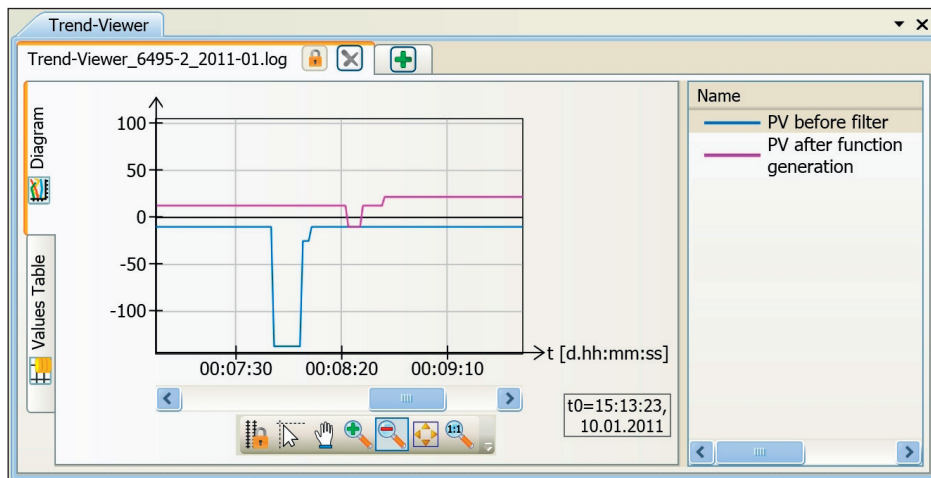


Parameters that can be executed are marked by these icons.

- ☞ Select the parameter that can be executed.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Execute]. Communication is automatically established if the online mode is not active.



## 5 Trend-Viewer



The Trend-Viewer only appears when it has been activated [✓] in the [View] menu. See ► Section 2.3. In the Trend-Viewer, the values of all write-enabled parameters as well as all device parameters that cannot be edited can be displayed as a graph plotted over time or in a values table. Approximately one million ( $2^{20}$ ) values per data point can be logged at a time. At a sampling rate of one second, the maximum logging duration is approx. 12 days. After this, the 16000 ( $2^{14}$ ) oldest values are automatically deleted to provide more space for new values. Values can only be recorded and displayed when the online mode for TROVIS-VIEW or the Trend-Viewer are active.



This icon indicates that the online mode of TROVIS-VIEW is active. Values are only recorded when the 'Online with main application' option is checked in [Options > Trend-Viewer].



This icon indicates that the online mode of the Trend-Viewer is active. Values are only recorded when the 'Trend-Viewer online mode, sampling time...' option is checked in [Options > Trend-Viewer].



### Note:

The Trend-Viewer settings are configured in [Options > Trend-Viewer]. See ► Section 2.6.5.

## 5.1 Configuring the Trend-Viewer

- ☞ Double-click [Neuer Ordner] field to name the Trend-Viewer.
- ☞ Activate the online mode of the Trend-Viewer, if required.



Online mode of the Trend-Viewer can be activated.



Online mode of the Trend-Viewer is blocked.



**Note:**

*The online mode of the Trend-Viewer is activated in [Options > Trend-Viewer]. If the Trend-Viewer is to run in its own online mode, the sampling time (rate) for recording data must be selected.*

### Adding or removing a Trend-Viewer



Use this icon to add a Trend-Viewer to a new tab. Click the tab to go to the Trend-Viewer. You can add as many Trend-Viewers as you like.



Use this icon to delete a Trend-Viewer.

## 5.2 Displaying parameters in the Trend-Viewer

### Inserting parameters into the Trend-Viewer

The Trend-Viewer shows write-enabled and non-editable device parameters after they have previously been inserted into the Trend-Viewer.

- ☞ Drag and drop parameters from the main window into the list of parameters in the Trend-Viewer.

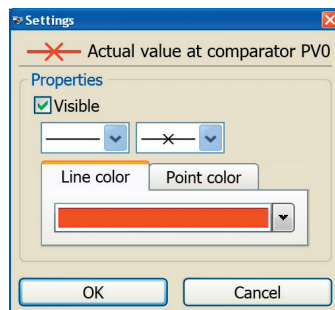
You can add as many parameters as you like into a Trend-Viewer. For a better overview, parameters can be distributed among several Trend-Viewers.

## Changing the parameter representation in the graph

- ☞ Select the parameter from the list [Name].
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Settings...]. The *Settings* dialog box appears.

**Alternatively**, open the dialog box by double-clicking the parameter.

- ☞ Change the properties of the lines and points.
- ☞ Click [OK] to confirm.



### Note:

If the 'Visible' box is not checked, the parameter is not displayed in the diagram. The parameter still appears in the Values Table.

## Deleting parameters

- ☞ Select the parameter from the list [Name].
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Delete].

## 5.3 Configuring the diagram

The standard diagram settings cause the entire adjustment range on the y-axis (vertical axis) to be visible. The visible range of the x-axis (horizontal axis) is determined by the window width of the diagram.

**Unlocking the zoom and scroll function for the y-axis** (only relevant when the Trend-Viewer diagram has more than one y-axis)

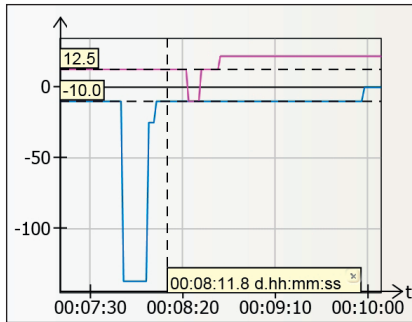


This icon indicates that the y-axes of the Trend-Viewer are linked with one another. You cannot zoom and scroll within a single axis. Click the icon to unlink the y-axes.



This icon indicates that the y-axes are unlinked. It allows you to zoom and scroll within a single axis. Click the icon to link the y-axes with one another.

## Selecting a single value



This icon is used to select a single value.

☞ Click Select icon.

## Shifting display section



This icon shifts the x-axis to the left and right.

- ☞ Click the icon to shift display section.
- ☞ Place the mouse cursor on the x-axis until the hand tool appears.
- ☞ Keep the left mouse key pressed down to shift the x-axis to the left or right.

## Zooming in



This icon is used to stretch the axes.

- ☞ Click the icon to zoom in.
- ☞ Place the mouse cursor on an axis or in the middle of the diagram until the magnifying glass tool appears.
- ☞ Click to zoom in.

### Zooming out



This icon is used to zoom out the axes.

- ☞ Click the icon to zoom out.
- ☞ Place the mouse cursor on an axis or in the middle of the diagram until the magnifying glass tool appears.
- ☞ Click to zoom out.

### Sizing all axes to match data contents



This icon allows the entire value range of the parameters to be displayed.

- ☞ Click the icon to size all axes to match data contents.

### Resetting all axes to start values



This icon allows you to show the entire value range of the parameter to be displayed on the y-axis. The x-axis starts at 00:00:00 hh:mm:ss and is reset to the default scaling which is determined by the window width of the diagram.

- ☞ Click the icon for resetting all axes to start values.



### 5.3.1 Deleting a diagram

The [Delete diagram] command causes the current Trend-Viewer (diagram, values table and list of parameters) to be deleted.

- ☞ Place the mouse cursor on the Trend-Viewer.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Delete diagram].

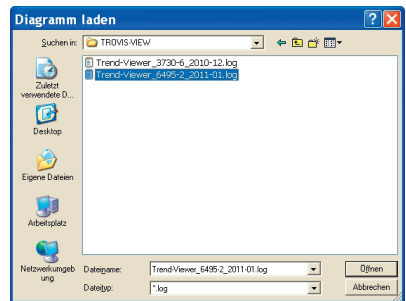


**Alternatively**, exit the Trend-Viewer by clicking this icon on the tab.

### 5.3.2 Loading a diagram

Trend-Viewer files are saved using the filename extension ".log".

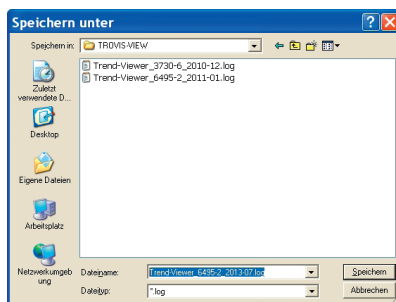
- ☞ Place the mouse cursor on the Trend-Viewer.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Load diagram...]. The *Load diagram* dialog box opens.
- ☞ Select the directory from the drop-down list where the file is stored.
- ☞ Select the file you want to open.
- ☞ Click [Open] to load diagram.



### 5.3.3 Saving a diagram

Trend-Viewer files are saved using the filename extension ".log".

- ☞ Place the mouse cursor on the Trend-Viewer.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Save diagram...]. The *Save As* dialog box opens.
- ☞ Select the location from the drop-down list where the file is to be saved.
- ☞ Enter the file name.
- ☞ Click [Save] to save diagram.



### 5.3.4 Printing a diagram

- ☞ Place the mouse cursor on the Trend-Viewer.
- ☞ Right-click to open a context-sensitive menu.
- ☞ Select [Print diagram...]. The *Print* dialog box opens.
- ☞ Perform print settings and start printing. See ► Section 2.1.4.

## 5.4 Changing to values table

Trend-Viewer

Neuer Ordner Trend-Viewer\_6495-2\_2011-01.log

Diagram

Values Table

# (666)	t[d.hh:mm:ss]	PV before filter	PV after filter
3	00:06:42.608	-10.0	
4	00:06:43.503	-10.0	
5	00:06:44.403	-10.0	
6	00:06:45.308	-10.0	
7	00:06:46.207	-10.0	
8	00:06:47.103	-10.0	
9	00:06:48.014	-10.0	
10	00:06:48.910	-10.0	
11	00:06:49.833	-10.0	
12	00:06:50.733	-10.0	
13	00:06:51.240	-10.0	
14	00:06:52.438	-10.0	
15	00:06:52.746		12.5
16	00:06:53.337	-10.0	
17	00:06:53.647		12.5
18	00:06:54.252	-10.0	
19	00:06:54.599		12.5
20	00:06:55.202	-10.0	

The values table contains all the measured data together with a time stamp of the parameters used in the Trend-Viewer.

Select [Values Table] tab.



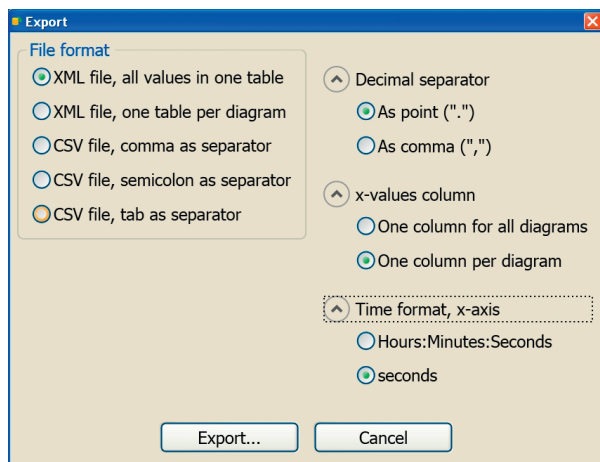
This icon is used to update the data of the values table.



**Note:**

The time stamp is based on the starting time when the online mode of the Trend-Viewer started. This starting time is indicated in the Trend-Viewer diagram by 't0'.

## 5.5 Exporting data



This icon is used to export the data of the values table.

- ☞ Select which file format is to be used (☉).
- ☞ Select which decimal separator is to be used (☉).
- ☞ Select which x-values column is to be used (☉).
- ☞ Select which time format for the x-axis is to be used (☉)
- ☞ Click [Export...] to start data export. The *Export* dialog box opens.
- ☞ Select the location from the drop-down list where the file is to be saved.
- ☞ Click [Save] to save data.

## 6 General layout adaptations

### 6.1 Resizing a window



This icon allows you to change the window size in the horizontal direction.

- ☞ Place the mouse cursor on the left or right edge of a window until the mouse cursor changes to a horizontal two-headed arrow.
- ☞ Click and hold the left mouse button down to resize the window's width.



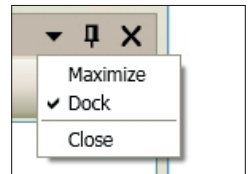
This icon allows you to change the window size in the vertical direction.

- ☞ Place the mouse cursor on the top or bottom edge of a window until the mouse cursor changes to a vertical two-headed arrow.
- ☞ Click and hold the left mouse button down to resize the window's length.

### 6.2 Undocking and maximizing a window

The Tree, User-defined Tree and Trend-Viewer windows can be undocked to show them separately from the program layout. This action causes the corresponding window to be undocked, allowing its size and position to be changed as required. Maximizing the window size causes the window size to be resized to fill the entire screen.

- ☞ Select [▼ > Maximize] or [▼ > ✓ Dock] in the top window bar or from the context-sensitive menu (after right-clicking on the window bar).



#### Window docking

An undocked window can be redocked in another position on the program layout. Position the window with the mouse anywhere on the program layout.



This icon shows all possible docking positions.



**Note:**

Select [View > Reset Layout] to reset how the window looks to the default program layout. See ► Section 2.3.4.

## 6.3 Closing windows

Click [▼ > Close] to close a window.



**Alternatively**, the window can be closed by clicking this icon on the window title bar.

### Opening windows

Open a closed window by selecting [View > Tree] or [View > User-defined Tree]. See ► Section 2.3.4.

## 6.4 Hiding windows automatically

A hidden window is only shown as a tab at the window's original position in the program layout. Place the mouse cursor over the tab to open the window. Remove the mouse cursor to close the window again.



This icon, located on the top window bar, allows you to hide a window.



This icon allows you to show a window permanently in the program layout.



**Note:**

Select [View > Reset Layout] to reset how the window looks to the default program layout. See ► Section 2.3.4.

### **Key combinations for menus**

Alt+D	Open the Device menu
Alt+E	Open the Edit menu
Alt+F	Open the File menu
Alt+O	Open the Options menu
Alt+V	Open the View menu
Alt+?	Open the ? (Help) menu

### **Key combinations for TROVIS-VIEW files**

Ctrl+N	Open new TROVIS-VIEW file
Ctrl+O	Open saved TROVIS-VIEW file
Ctrl+P	Print TROVIS-VIEW file
Ctrl+S	Save TROVIS-VIEW file

### **Key combinations for user-defined tree**

Ctrl+C	Copy folder/parameter for a user-defined tree
Ctrl+V	Insert folder/parameter into a user-defined tree
Ctrl+X	Cut out folder/parameter from a user-defined tree
F2	Rename folder or headline



SAMSON AG · MESS- UND REGELTECHNIK  
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany  
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507  
samson@samson.de · [www.samson.de](http://www.samson.de)

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